

CATALYST ENHANCEMENT

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Abstract of the Disclosure

10 A process for enhancing metal catalysts for carbon monoxide
hydrogenation comprising reducing the catalyst so that at least a portion is in the
metallic state, impregnating under a non-oxidative atmosphere with a solution of
a salt of at least one metal, optionally in combination with at least one of an
ammonium salt, an alkyl ammonium salt, a weak organic acid and ammonia,
oxidizing with a gaseous oxidant in the presence of the impregnating solution,
and reducing to form an active catalyst. Used catalysts enhanced by the process
15 are initially treated to decrease their hydrocarbon content. The treatment may be
carried out in a single reactor, or by carrying out up to all steps after catalyst
may be withdrawn from a reactor and returned to at least one reactor, both
preferably during operations. Up to all steps may be effected in a subsequent
reactor, or in specialized apparatus.